

Purpose:

The purpose of this step is to see if the theory worked.

Outcome:

The outcome of this step will be a data-based decision to act on (standardize) or abandon the actions taken to improve the system.

Tools:

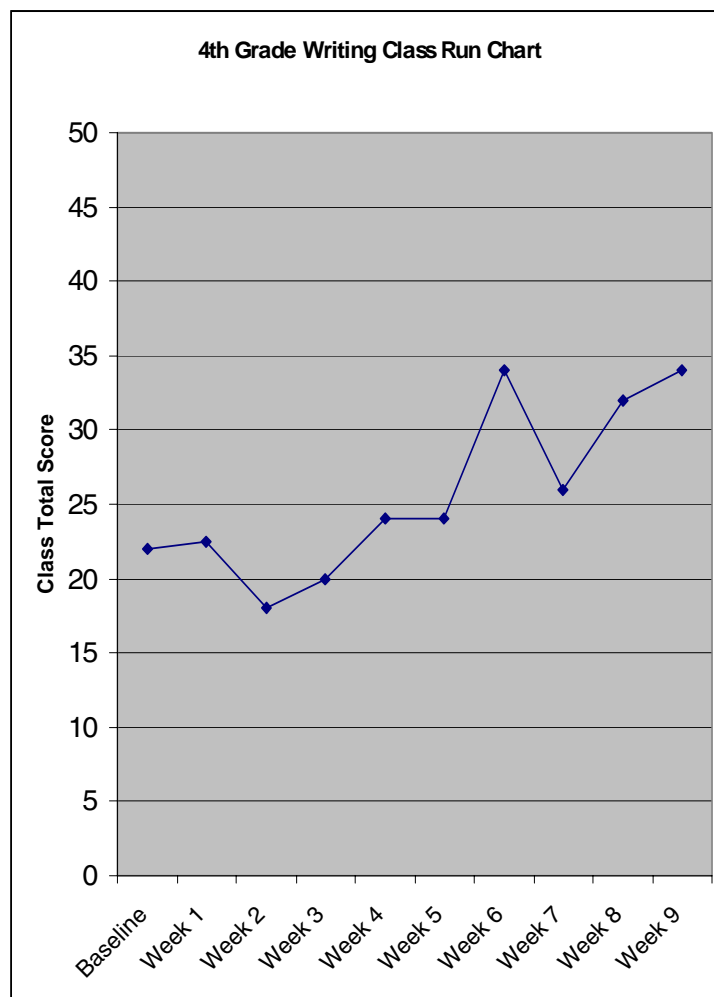
Control chart, control chart interpretation, run chart, histogram, Pareto diagram, scatter diagram, bar chart

Now that you have tried out your improvement theory, you are ready to study the data. Let the data do the talking. What results did you expect? How did you predict that the measures would change? How long did you think it would take for the changes to appear after you began the tests? Be sure to use the same tools (control chart, Pareto diagram, etc.) that were used before the tests. Record and analyze any surprises along with your primary findings.

The writing improvement team studied its student run charts and scatter diagrams on writing performance and bar charts on attitude. Their results and interpretations appear on the next pages.

Study the results

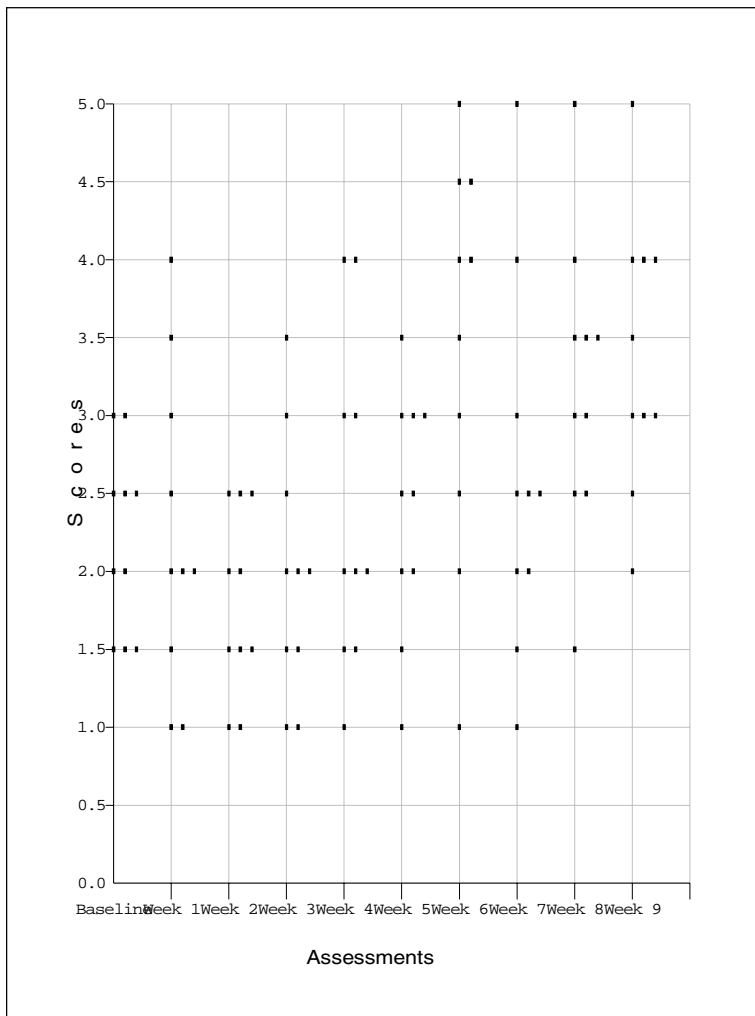
The Class Run Chart showed dramatic progress. Week 6 might be a special cause, but without a control chart the team could not make a specific determination.



Study the results

The Class Scatter Diagram showed that students were writing at higher levels as the weeks went by. By the ninth week, no student in the sample wrote below 2.0 on the rubric. Variation was decreasing and the mean was increasing.

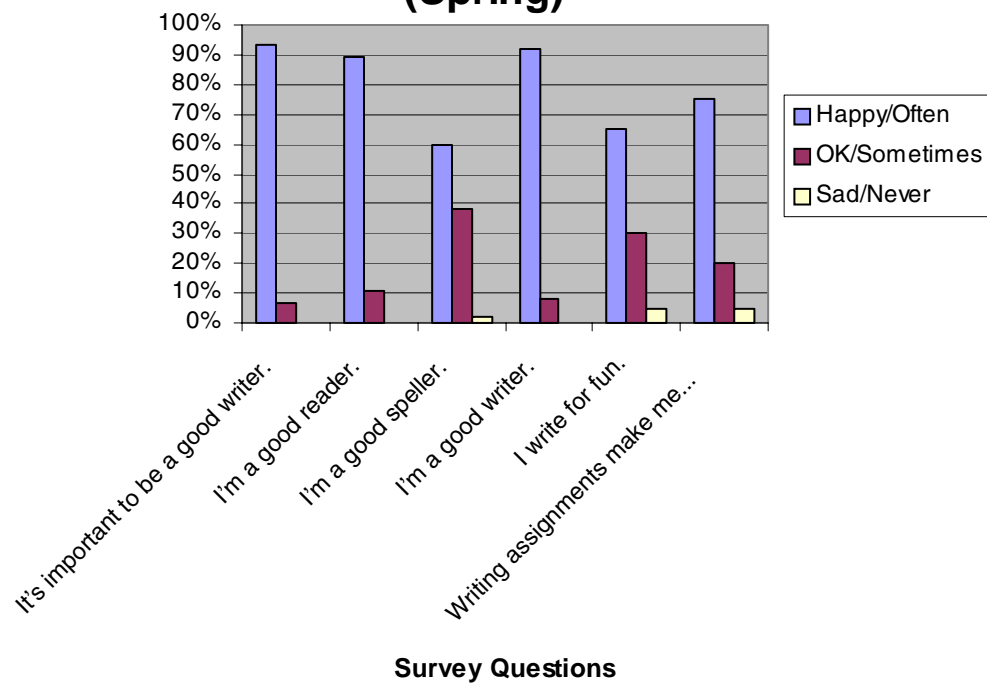
4th Grade Writing Class Scatter Diagram



Study the results

The simple bar chart of the spring survey data showed that many more students were more positive about their writing than they had been in the fall.

**Writing Survey Responses
(Spring)**



Display and Interpret Your Results

Show and interpret your graphs. Explain clearly what the data tell you, and write a caption of explanation with each graph.

Study
the
results

If you made control charts, are special causes of variation indicated? If so, plan now how to address them. If not, move on to the next page.

Study the results

You have displayed the hard data showing the tangible results. Now you want to consider the intangible (non-quantifiable) results. What do you expect to see? Does the new method involve the students? Are all those involved satisfied with the new arrangement?

The writing improvement team was surprised at how much the students supported one another in improving the whole class performance rather than just that of individuals. They also surprised to see how much learning transfer and retention occurred when students took the state standardized achievement tests.

What are your intangible results and surprises?

What if your tests do not bring improvement? What would you recommend? Should you go back to the improvement theory?